

# Soft Matter

Where physics meets chemistry meets biology for fundamental soft matter research

[rsc.li/soft-matter-journal](https://rsc.li/soft-matter-journal)

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

## IN THIS ISSUE

ISSN 1744-6848 CODEN SMOABF 20(26) 5031-5262 (2024)



### Cover

See Stefan A.L. Weber *et al.*, pp. 5045–5052. Image reproduced by permission of Katharina Maisenbacher (MPI-P Mainz) from *Soft Matter*, 2024, 20, 5045.



### Inside cover

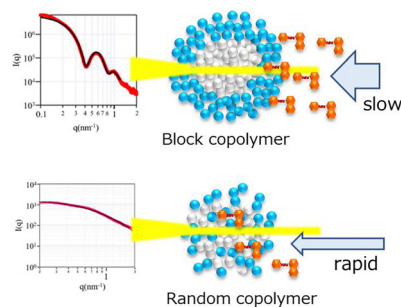
See Masahiko Asada, Hidenori Otsuka *et al.*, pp. 5040–5044. Image reproduced by permission of Hidenori Otsuka from *Soft Matter*, 2024, 20, 5040.

## COMMUNICATION

5040

### Investigating the effect of the micelle structures of block and random copolymers on dye solubilization

Masahiko Asada,\* Airi Wakai, Hisakazu Tanaka, Yukie Suwa, Yuuji Tamura, Mariko Kouyama, Shigehito Osawa and Hidenori Otsuka\*

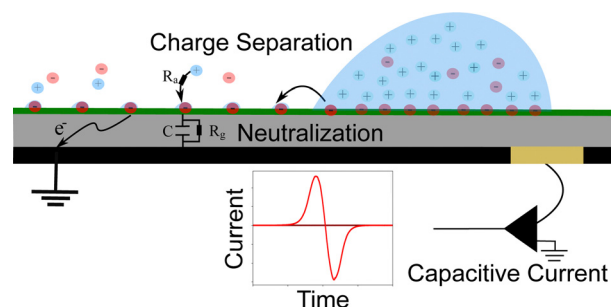


## PAPERS

5045

### Surface charge density and induced currents by self-charging sliding drops

Pravash Bista, Aaron D. Ratschow, Amy Z. Stetten, Hans-Jürgen Butt and Stefan A.L. Weber\*



# Royal Society of Chemistry approved training courses

Explore your options.  
Develop your skills.  
Discover learning  
that suits you.

**Courses in the classroom,  
the lab, or online**

Find something for every  
stage of your professional  
development. Search our  
database by:

- subject area
- location
- event type
- skill level

Members **get at least 10% off**

Visit [rsc.li/cpd-training](https://rsc.li/cpd-training)

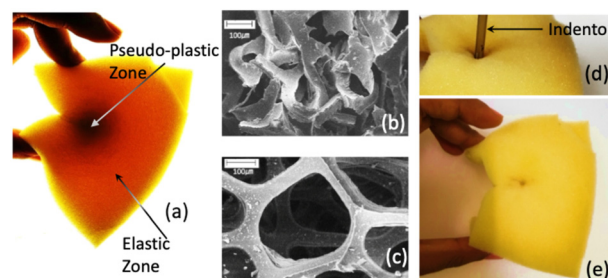
**SAVE  
10%**



5053

## Imprinting reversible deformations on a compressed soft rod network

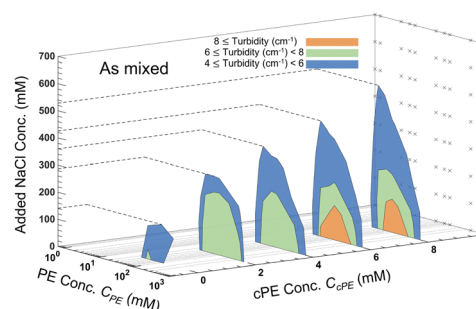
Harsh Jain\* and Shankar Ghosh



5060

## Quantitative turbidimetric characterization of stabilized complex coacervate dispersions

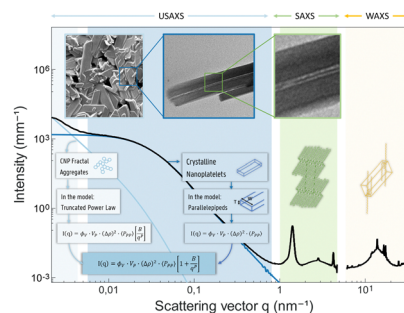
Advait Holkar, Shang Gao, Kathleen Villaseñor, Michael Lake and Samanvaya Srivastava\*



5071

## Multiscale analysis of triglycerides using X-ray scattering: implementing a shape-dependent model for CNP characterization

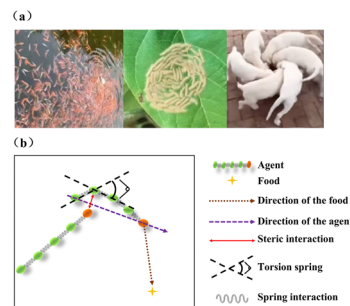
Ivana A Penagos, Fien De Witte, Tom Rimaux, William Chèvrement, Isabel Pintelon, Koen Dewettinck and Filip Van Bockstaele\*



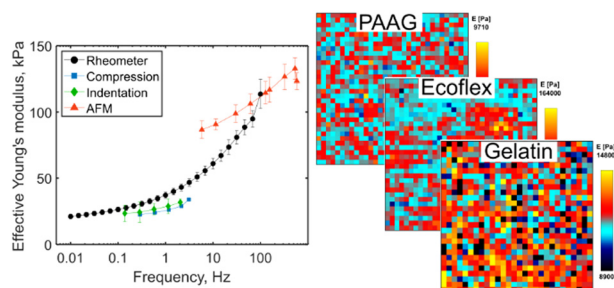
5086

## Spontaneous stable rotation of flocking flexible active matter

Gaixiao Jiang, Zhihong You, Rui Ma\* and Chenxu Wu\*



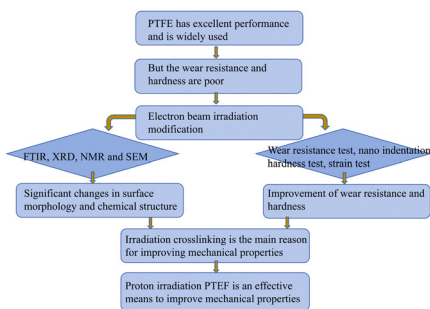
5095



## Mechanical characterization of soft biomaterials: which time and spatial scale to choose?

Ekaterina S. Krivega, Svetlana L. Kotova,  
Peter S. Timashev and Yuri M. Efremov\*

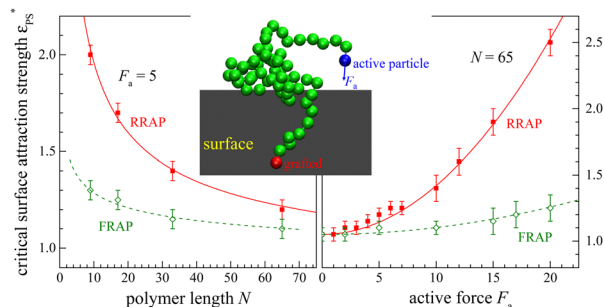
5105



## Electron irradiation enhanced wear resistance and hardness of polytetrafluoroethylene (PTFE)

Yuliang Yao, Yi Wei, Yong Fan and Engang Fu\*

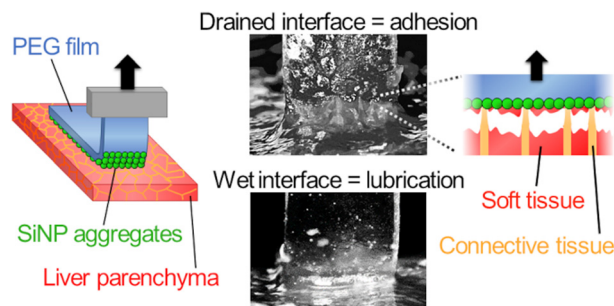
5113



## Langevin dynamics simulations for the critical adsorption of end-grafted active polymers

Meng-Bo Luo\* and Yi-Fan Shen

5122



## Hydrogel-tissue adhesion by particle bridging: sensitivity to interfacial wetting and tissue composition

Raphaël Michel\* and Laurent Corté\*

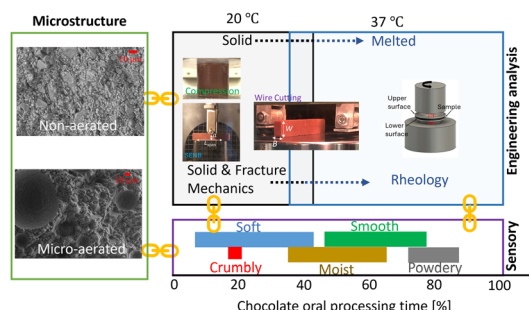




5134

## Combining fracture mechanics and rheology to investigate the impact of micro-aeration on chocolate oral processing

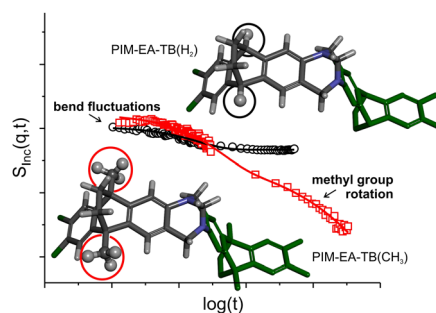
G. Samaras,\* D. Bikos,\* P. Cann, M. Masen, Y. Hardalupas, C. Hartmann, J. Vieira and M. N. Charalambides



5153

## Microscopic molecular mobility of high-performance polymers of intrinsic microporosity revealed by neutron scattering – bend fluctuations and signature of methyl group rotation

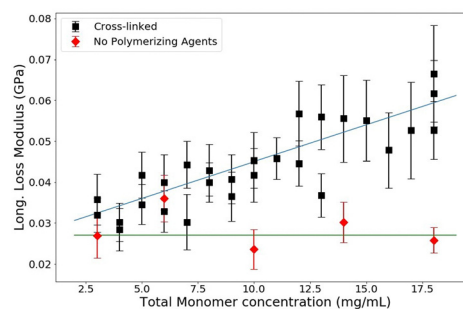
Reiner Zorn, Paulina Szymoniak, Mohamed A. Kolmangadi, Richard Malpass-Evans, Neil B. McKeown, Niina H. Jalarvo, Madhusudan Tyagi, Martin Böhning and Andreas Schönhals\*



5164

## Effect of polymerization on free water in polyacrylamide hydrogels observed with Brillouin spectroscopy

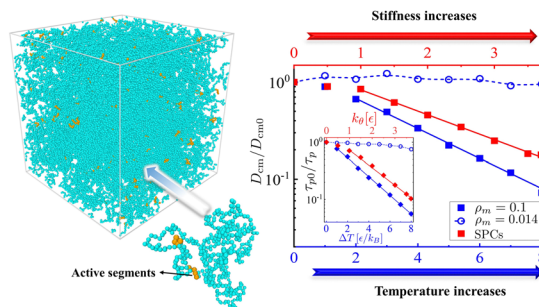
Britta R. Gorman and L. E. McNeil\*



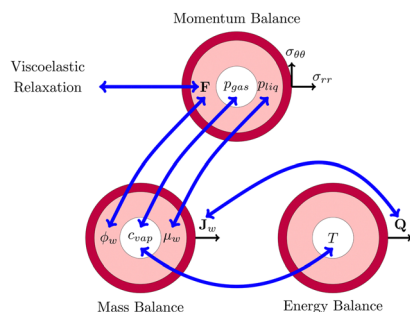
5174

## Activity-induced stiffness, entanglement network and dynamic slowdown in unentangled semidilute polymer solutions

Jing Li, Bokai Zhang\* and Zhi-Yong Wang\*



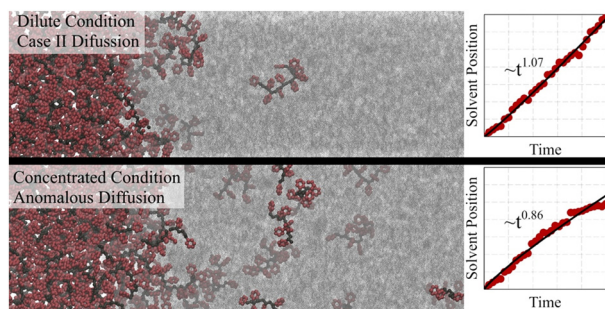
5183



### Pore development in viscoelastic foods during drying

Ruud van der Sman,\* Michele Curatolo and Luciano Teresi

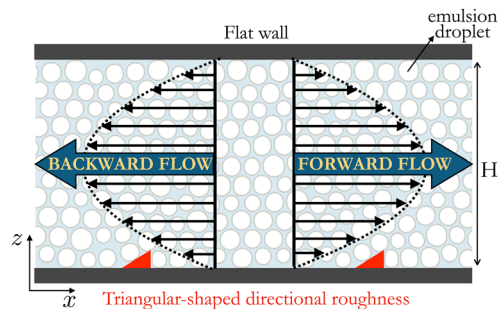
5195



### All-atom molecular dynamics simulation of solvent diffusion in an unentangled polystyrene film

Javad Tamnanloo and Mesfin Tsige\*

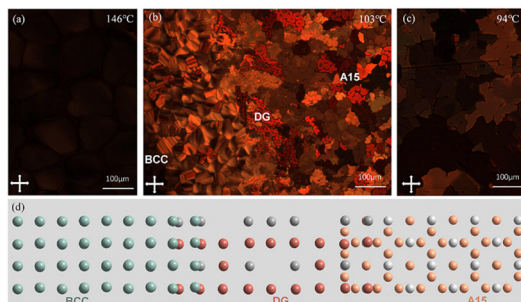
5203



### Emulsions in microfluidic channels with asymmetric boundary conditions and directional surface roughness: stress and rheology

Francesca Pelusi,\* Daniele Filippi, Ladislav Derzsi, Matteo Pierno and Mauro Sbragaglia

5212



### Frank–Kasper phases in charge transfer complexes enable tunable photoelectronic properties

Xinyue Zhao, Chenhui Wei, Wang Fuzhou, Xinran Zhang, Jianchuang Wang, Mengfei Wang, Maoxin Zhang, Chunxiu Zhang,\* Erqiang Chen\* and Haifeng Yu\*

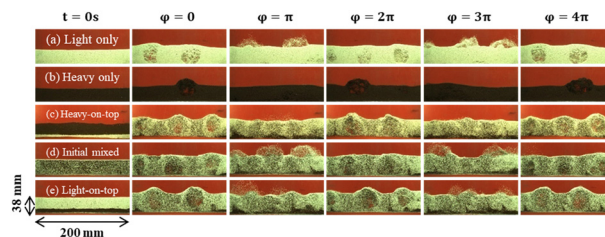


## PAPERS

5221

## Structured bubbling in vibrated gas-fluidized beds of binary granular particles: experiments and simulations

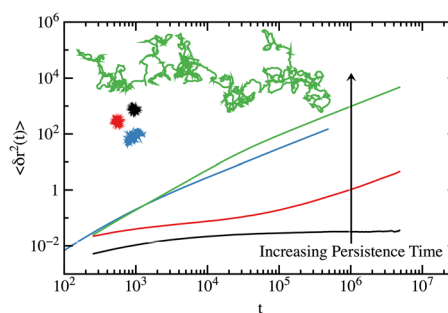
Jagan Mohan Sanghishetty, Naimah M. Russ, Christopher Spitler, Qiang Guo, D. R. Nagaraj, Raymond S. Farinato and Christopher M. Boyce\*



5237

## Extremely persistent dense active fluids

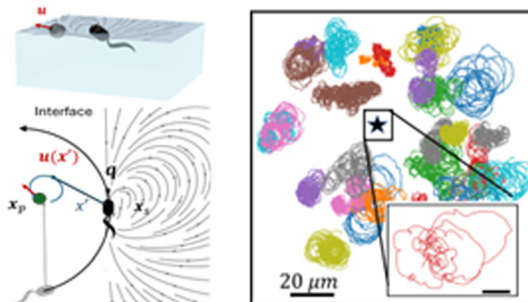
Grzegorz Szamel\* and Elijah Flenner



5245

## Swimmers at interfaces enhance interfacial transport

Jiayi Deng, Mehdi Molaei, Nicholas G. Chisholm, Scarlett E. Clarke and Kathleen J. Stebe\*



## CORRECTION

5258

## Correction: A passive star polymer in a dense active bath: insights from computer simulations

Ramanand Singh Yadav, Sanaa Sharma, Ralf Metzler\* and Rajarshi Chakrabarti\*

